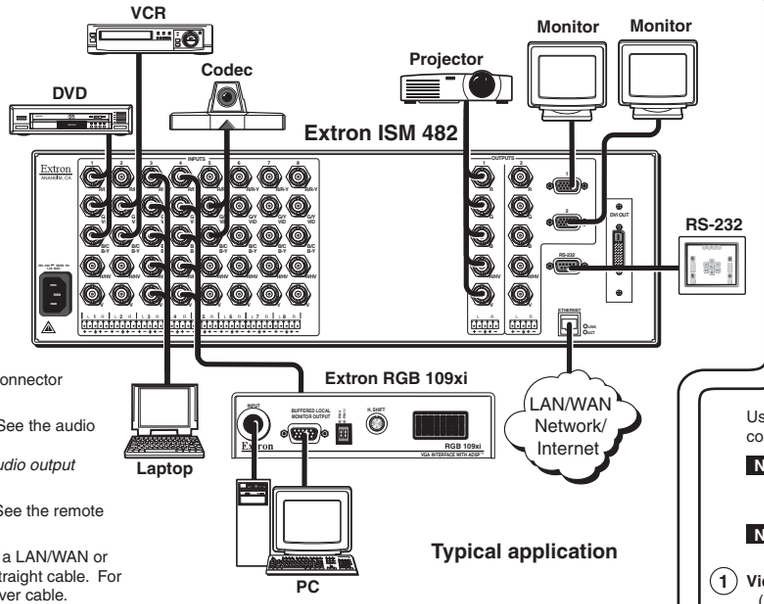
ISM 482 Integration Scaling Matrix Switcher

Installation and Operation

Installation

1. Ensure power is off to the ISM and all other devices that will be connected to it. See the typical application diagram at right.
2. **If desired**, install the optional DVI output card. Refer to the ISM 482 User's Manual for details.
3. **If desired**, mount the ISM in a rack. **Otherwise**, affix the four rubber feet to the bottom of the ISM in the four corners.
4. Connect up to 8 computer/RGB, component video, S-video, or composite video source devices to the ISM's BNC inputs. See the input and output BNC connections diagram below for cabling the various video formats.
5. Connect up to 8 stereo or mono sources to the ISM's captive screw audio inputs. See the audio input connections diagram below to properly wire the connectors.
6. Connect displays and/or other output devices to the ISM's BNC and 15HD outputs. See the RGBHV and RGBS examples on the input and output BNC connections diagram below for cabling outputs.
7. **If a DVI output board is installed**, connect a DVI or HDMI (with a DVI-to-HDMI adapter) compatible monitor or display to the rear panel DVI connector. The DVI connector outputs the output 1 video signal.
8. Connect audio output devices, such as an audio amplifier or powered speakers. See the audio output connections diagram below to wire the connectors.
   CAUTION *Incorrect audio connector wiring can damage the switcher. See the audio output connections diagram below.*
9. **If desired**, connect a PC or third-party control system to the ISM's RS-232 port. See the remote port diagram below.
10. **If desired**, plug an RJ-45 connector into the Ethernet port to connect the ISM to a LAN/WAN or directly to a computer. For a network connection, wire the interface cable as a straight cable. For connection to a computer or control system, wire the interface cable as a crossover cable.
11. Plug the ISM and input and output devices into a grounded AC power source, and turn on the input and output devices.



Typical application

Operation

1. Select video and/or audio to switch by pressing the Video/Audio button as necessary to light the green Video LED and/or red Audio LED.
2. As necessary, press the Output 1 or Output 2 button to select the desired output. (Only one output can be selected at a time.)
3. Press an input button to select a video and/or audio input for the selected output. The selected input is indicated by the solid green (for video) and/or red (for audio) Input LED(s). Press the unselected output button to tie an input to that output or to view that tie. Both outputs' input selections can be viewed in the LCD display cycle.
4. Use the LCD menu screens (see Main Menus and Operations at right), SIS commands, or the accompanying software program to configure the ISM inputs and outputs. Refer to the ISM 482 User's Manual for details.

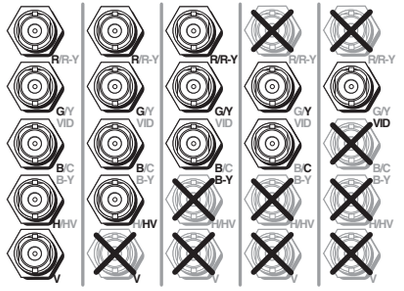
Picture Adjustments

Make picture adjustments (**color [RGBcS, component, S-video, and composite video only] / tint [NTSC S-video and composite video only], contrast / brightness, size, centering,** and **filter**) to the input connected to the selected output by pressing the desired Picture Adjustments button and then rotating the Adjust ◄► knob to adjust the setting on the left side of the LCD screen or the Adjust ▲▼ knob to adjust the setting on the right side of the LCD screen. Press the unselected output button to select and make picture adjustments to that output's connected input.

Auto Imaging

Auto imaging automatically sizes and centers the selected input. Execute the auto imaging feature for a specific input by pressing and holding the appropriate input button until the LCD displays the message "**Auto Image Input #*n***", releasing the input button, and then pressing and releasing the input button again.

Input and output BNC connections

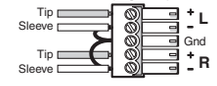


RGBHV Video | RGBS or RGBcvS Video | RGsB or Component Video | S-Video | Composite Video

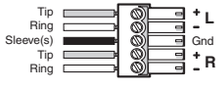
Audio Connections

Inputs

Unbalanced (high impedance)

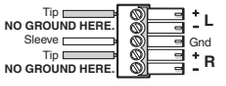


Balanced (high impedance)



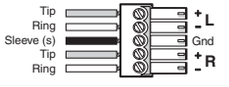
Outputs

Unbalanced

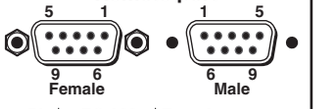


CAUTION For unbalanced audio, connect the sleeve(s) to the ground contact. **DO NOT** connect the sleeve(s) to the negative (-) contacts).

Balanced

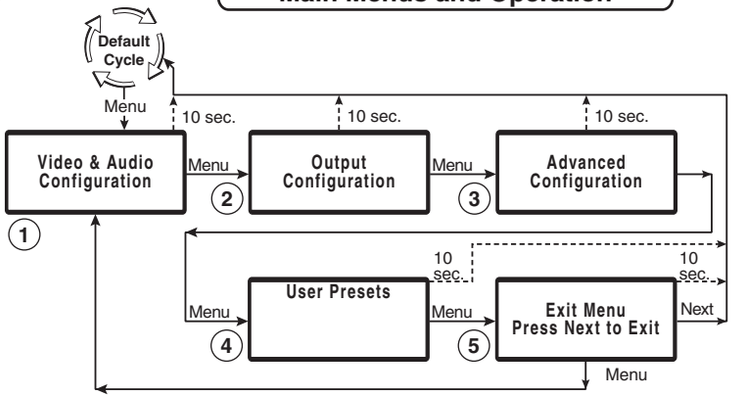


Remote port



Pin	RS-232	Function
1	—	Not used
2	TX	Transmit data
3	RX	Receive data
4	—	Not used
5	Gnd	Signal ground
6-9	—	Not used

Main Menus and Operation



Use the Menu and Next buttons to navigate through the menu system. Use the Adjust knobs to make configuration changes.

NOTE If you press the Menu button while a submenu is active, the next main menu will become active. For example, the menu will change from the Input Configuration menu or submenus to the Output Configuration main menu.

NOTE To return to the default screens, let the ISM remain idle for 10 seconds until the selected screen times out, or press the Menu button until the Exit Menu appears, then press the Next button.

(1) **Video & Audio Configuration —** Select an input. The Adjust ◄► knob selects the desired input video format (RGB, RGBcvS, YUVi, YUVp, Betacam 50, Betacam 60, HDTV, S-video, or composite video). The Adjust ▲▼ knob adjusts the input audio level in the range -15dB to +9dB. The default for each input is RGB video and 0dB audio level.

(2) **Output configuration —**

- **Output resolution and refresh rate —** The Adjust ◄► knob selects the resolution for the selected output. The Adjust ▲▼ knob selects the refresh rate. "**Lock**" indicates Accu-RATE Frame Lock™. The default is 1024 x 768 at 60 Hz.
- **Output sync and polarity —** The Adjust ◄► knob selects the sync format, RGBHV or RGBS, for the selected output. The Adjust ▲▼ knob selects the polarity of the H and V output. The default values are RGBHV, H Sync negative, and V Sync negative.

(3) **Advanced Configuration —**

- **Test Pattern —** Select a test pattern: Color Bars, cross hatch, 4 x 4 cross hatch, gray scale, crop, alternating pixels, aspect ratio 1.78/1.85/2.35, or ramp. The Adjust ◄► knob selects a test pattern. The Adjust ▲▼ knob selects On or Off for either or both outputs to receive the test pattern. The default is both Off.
- **Blue Only Mode and Edge Smoothing —** Rotate the Adjust ◄► knob to select (< >) blue only mode On or Off for either or both outputs. Rotate the Adjust ▲▼ knob to select the edge smoothing feature On or Off for either or both outputs. Edge smoothing softens the edges of a picture by minimizing pixel differences.
- **Output Blanking —** The Adjust ◄► knob selects the number of top lines to blank. The Adjust ▲▼ knob selects the number of bottom lines. Blanking masks noise on the top and bottom of a scaled image that can result from processes such as captioning or tapehead switching.
- **RGB Delay —** The Adjust ◄► knob sets the RGB delay for the output 1 input selection from 0 seconds to 5 seconds in 0.1 second steps. The Adjust ▲▼ knob sets the RGB delay for the output 2 input selection. The default for both outputs is 0.2 seconds.
- **Auto Imaging and Auto Memories —** The Adjust ◄► knob toggles auto imaging on and off for all input selections. Auto imaging automatically sizes and centers each newly detected input. The Adjust ▲▼ knob toggles the auto memories feature on and off for all input selections. Auto memories save and recall centering, sizing, and filtering information for input rates, based on the frequency.
- **Enhanced Mode —** Either Adjust knob toggles enhanced mode On or Off for either or both outputs. Enhanced mode is an automatic gain control for S-video and composite video inputs.
- **Pixel Phase —** The Adjust ◄► knob sets the pixel phase adjustment for the input connected to output 1 from 0 to 31. The Adjust ▲▼ knob sets the pixel phase adjustment for the input connected to output 2. Sampling at the optimum pixel phase results in a bright and stable scaled output. The default is 16.
- **PAL Film Mode —** Either Adjust knob selects On or Off for the selected input. The PAL film mode (2:2 pulldown detection) should be used for a video source that is PAL video that originated from film. Select other inputs as necessary to configure.
- **Reset —** Resets the ISM to its factory default values. While the Reset submenu is active, press and hold the Black/Mute button until the LCD displays the reset message.

(4) **User Presets —** Three user presets per input are saved and erased from the Save Preset or Erase Preset menu. Either knob selects (< >) among the presets. The Next button saves or erases the preset. N/A exits without saving or erasing. (Recall user presets by repeatedly pressing the applicable Input button.)

(5) **Exit —** Press the Next button to return to the default display cycle or press the Menu button to return to the main menu system.

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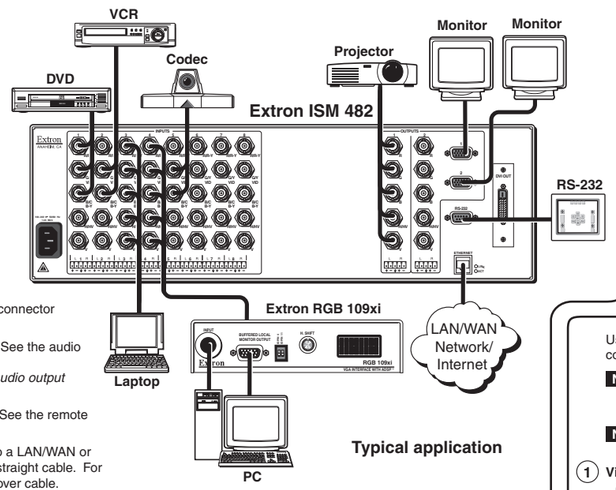

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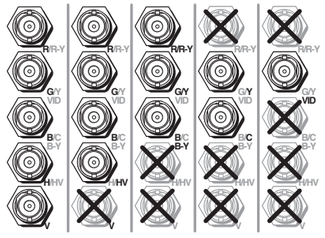

RGBHV Video | RGBS or RGBcvS Video | RGsB or Component Video | S-Video | Composite Video

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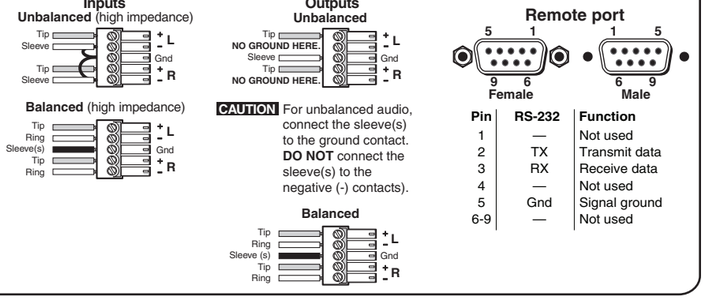

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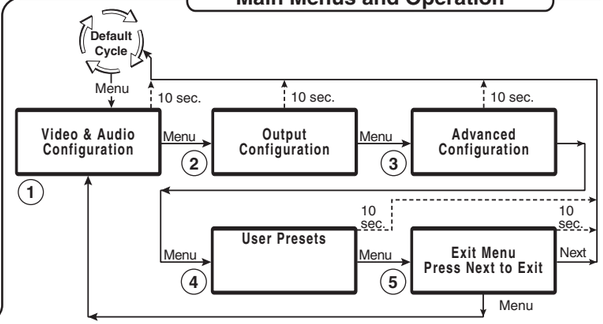

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